AVer SF2012H-C

User Manual

Table of Contents

Preface

The SF2012H-C is a compact cube camera for indoor use with two-way audio communication. It has the added security of a Micro SD based local backup capacity ensuring that images of events also save locally when the alarm is triggered or the network is down. This compact camera offers HD720p resolution at 30fps and advanced features including intelligent motion detection and privacy masking. The 2-megapixel H.264 SF2012H-C camera can truly provide your system with high-quality, discreet indoor surveillance coverage.

Product Specifications

- 2M-pixel CMOS sensor
- Power over Ethernet (PoE)
- H.264/MJPEG/MPEG-4 (3GPP Only) compression formats
- SD/SDHC card backup
- 2-way audio
- 3GPP mobile phone/PDA support
- SDK for software integration
- Free bundled recording software
- 720P Real-time
- Triple Streaming

Specifications

Hardware	
CPU	ARM 9 ,32-bit RISC
RAM	256MB
Flash	16MB
Image sensor	1/3.2” CMOS (2 megapixels)
Sensitivity	1.5 lux @F2.0
Lens Type	4.3mm, F2.0
Audio in	Built-in MIC
Audio Out	1
Power	DC 12V
Dimensions(WxHxD)	94.3 x 59.1 x 45.2 mm

Network	
Ethernet	10/100 Base-T
Network Protocol	HTTP, TCP/ IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP,RTSP, RTP, RTCP, Multi-casting
System	
Video Resolution	1600x1200, 1280x1024, 1280x960,1280x720, 800x600,640x480, 320x240, 176x144
CMOS setting	Brightness, Contrast, Saturation, Exposure, Sharpness, BLC, AGC, Night Mode, Flip, Mirror, Outdoor, Indoor
Image snapshot	Yes
Full screen monitoring	Yes
Privacy Mask	Yes, 3 different areas
Compression format	H.264/ JPEG/ MPEG-4 (3GPP only)
Video bitrates adjust	CBR, VBR
Motion Detection	Yes, 3 different areas
Triggered action	Mail, FTP, Micro SD/SDHC Card
Pre/ Post alarm	Yes (Configurable)
Security	Password Protection
Firmware upgrade	HTTP mode (Can Be Upgraded Remotely)
Simultaneous connection	Up to 10
Audio	Yes, 2-way (mono)
Operation Temperature	-10~ 40℃
Micro SD/SDHC Card management	
Recording Trigger	Motion Detection, Schedule
Video Format	AVI, JPEG
Video playback	Yes
Delete file	Yes

Web browsing requirement		
OS		Windows® XP (32-bit), 7 (32/64-bit) Microsoft® IE 6.0 or above (32-bit only)
Hardware	Suggested	Intel® Dual Core 1.66GHz, RAM: 1024MB, Graphics Card: 128MB
	Minimum	Intel-C 2.8G, RAM: 512MB, Graphics Card: 64MB

Package contents

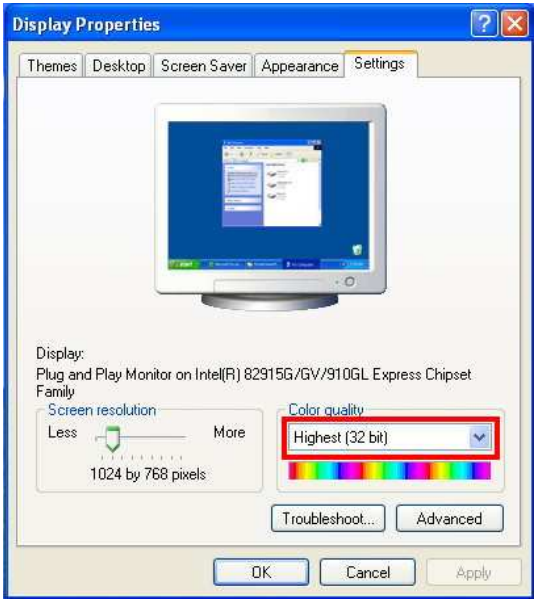
Item	Descriptions
	1. SF2012H-C
	2. Stand box
	3. Ethernet cable
	4. Power Adaptor(DC 12V/1A)
	5. CD (User's Manual and Quick Guide included)

Product Installation

Monitor Setting

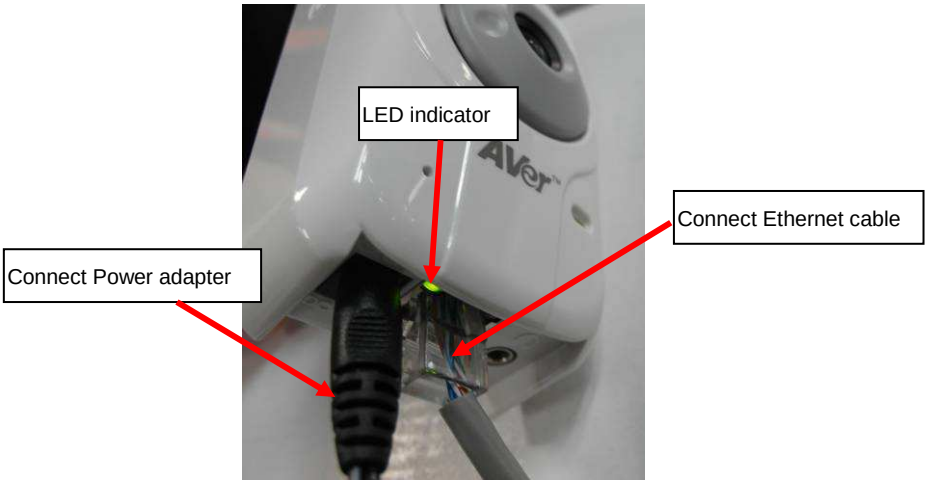
1. Right-click on the desktop. Select " **Properties**"

2. Change "Color quality" to "**Highest (32-bit)**".



Hardware Installation and I/O Pin Assignment

1. Connect power adapter.
2. Connect IP Camera to PC or network with Ethernet cable.



3. Set up the network configurations according to the network environment. For further explanation, please refer to **Network Configuration for IP Camera**.

IP Assignment

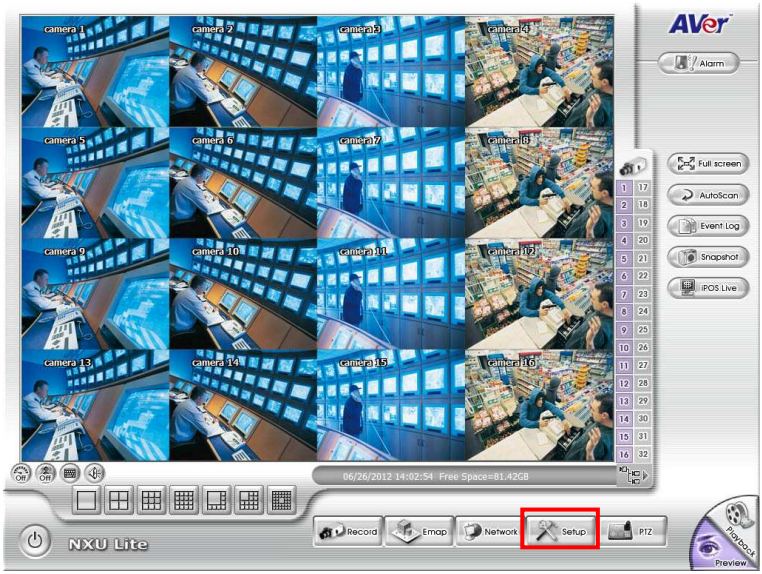
There are two ways to find IP Camera:

- Finding IP Camera by using “NXU Lite recording software”
- Finding IP Camera by using “IP installer”

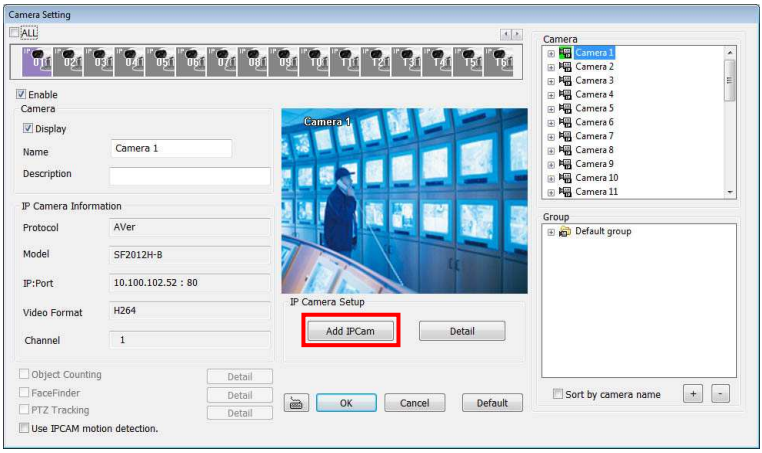
Finding IP Camera by using “NXU Lite recording software”

1. The NXU Lite software is in the attached software CD. Before launching it, please install the software first. During the installing process, users will be required to input a User name and Password for login NXU Lite system. Users can define the User name and Password as wishes. Please refer to NXU Lite user manual for detailed installation instruction.
2. To run the application, double-click  on your PC desktop or click **Start** > **Programs** > **DVR** > **NXU Lite**. For security purpose, some of the features would require you to enter User name and Password before it can be accessed. When the Authorization dialog box appears, key in your User ID and Password. (If this is the first time, enter the one you have registered when installing the software.

3. Click “**Setup**” button.

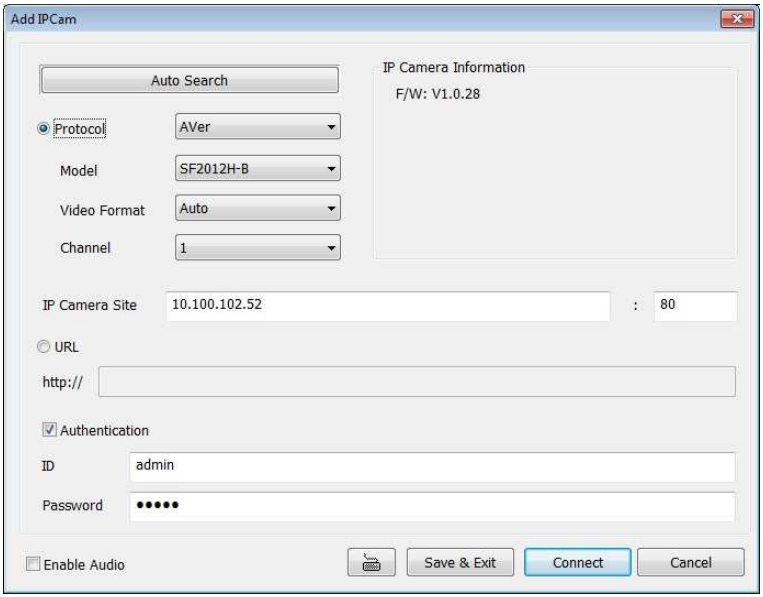


4. Click “**Add IPCam**” button.

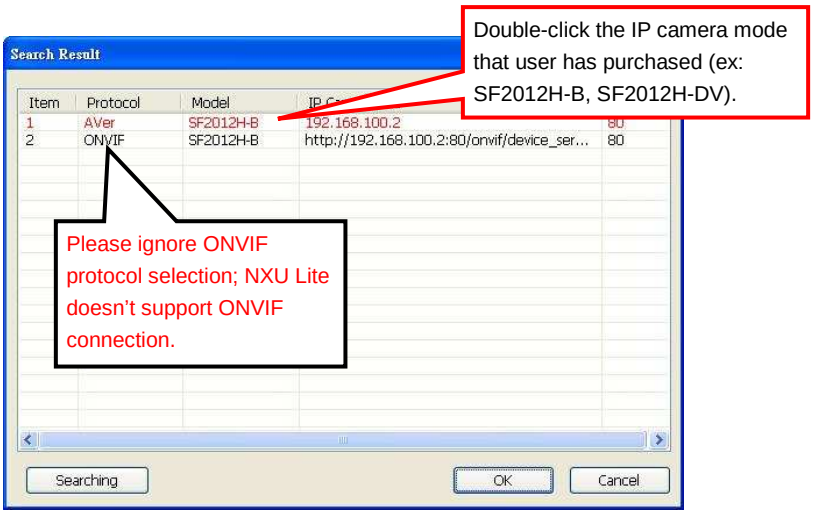


5. Select “**IP Camera**” item.

6. Key in IP Camera's ID and Password (default is **admin/admin**) and click "**Auto Search**" to find camera.



7. In Search Result window, click it the IP camera model that user has purchased (**Please ignore ONVIF connection item**); the camera is in red text that is configurable. User can double-click on the camera is in red text and configure the IP camera's setting; even the IP camera is not in the same IP segment. Press "**OK**" to back to previous screen and press"**Connect**" to start live view.



Finding IP Camera by using “IP installer”

Use the software, “**IP Installer**” to assign the IP address of the IP camera. The software is in the attached software CD.

IP installer supports two languages

- **IPInstallerCht.exe:** Traditional Chinese version
- **IPInstallerEng.exe:** English version

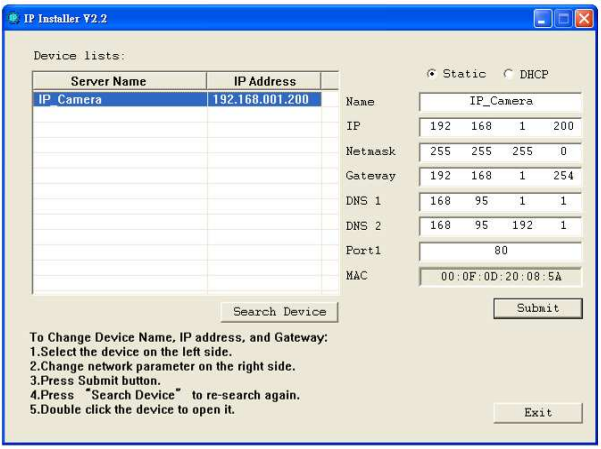
There are 3 kinds of IP configuration.

- Fixed IP (Public IP or Virtual IP)
- DHCP (Dynamic IP)
- DHCP server/router network automatically assigns IP addresses to devices. You can use the **IP Installer** software in the CD to search for the IP camera(s) in the network.
- Dial-up (PPPoE)

Execute IP Installer

For Windows® XP (SP2) users, the following message box may appear. Please click “**Unblock**”.

IP Installer configuration:



1. IP Installer will search all IP cameras connected on the LAN. The user can click "**Search Device**" to search again.
2. Click one of the IP cameras listed on the left side. The network configuration for this IP camera will show on the right side. You may change the name of the IP camera to your preference (eg: Office, warehouse) in "**Name**" on the right side.

Using DHCP Server/Router Network

To use DHCP, please check DHCP and click "**Submit**" then click "**OK**". It will apply the change and reboot the Device.

Using NON-DHCP Server/Router Network

In Non-DHCP server/router network, the static IP address must be assigned to the device each time when adding another IP camera to the network; the default IP address of the current one must be changed to avoid conflict.

Please make sure the Subnet of the PC's IP address and the IP camera's IP address are the same.

[Example]

The same Subnet:

IP camera IP address: 192.168.1.200

PC IP address: 192.168.1.100

Different Subnets:

IP camera IP address: 192.168.2.200

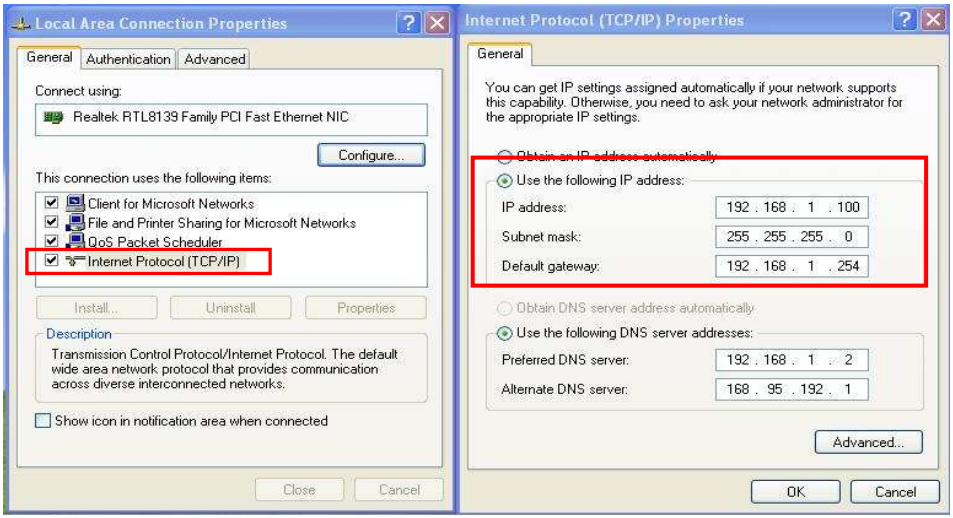
PC IP address: 192.168.1.100

To Change PC IP Address:

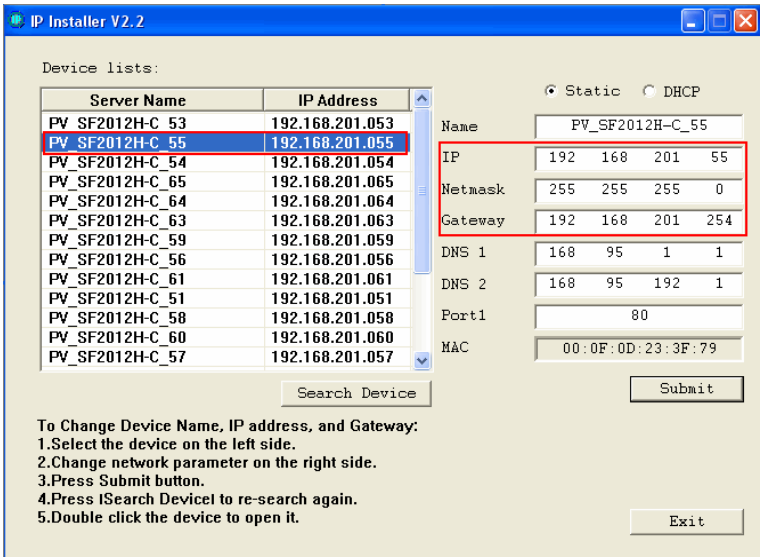
Control Panel→Network Connections→Local Area Connection Properties→Internet Protocol (TCP/IP) →Properties

Please make sure your IP camera and PC have the same Subnet. If not, please change IP camera subnet or PC IP subnet accordingly.

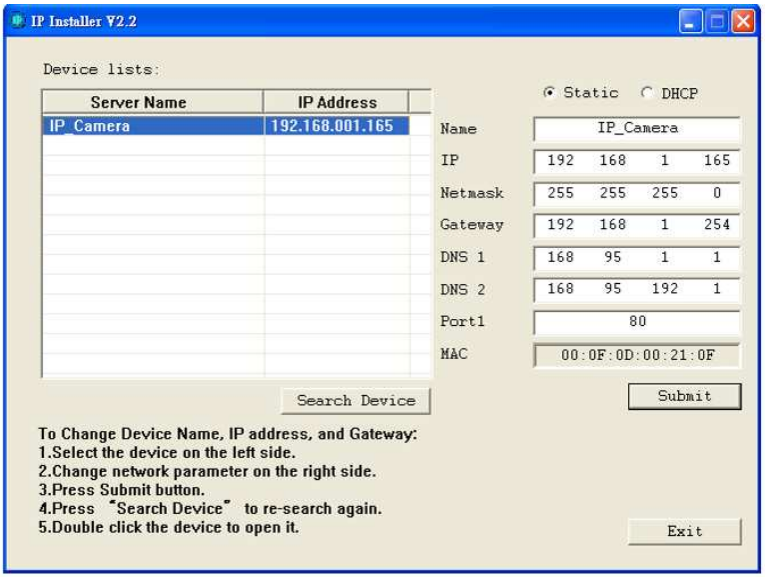
PC's IP address:



IP camera IP addresses:



3. A quick way to access remote monitoring is to left-click the mouse twice on a selected IP camera in "Device lists" in IP Installer. Upon doing so, the Internet Explorer browser should open.



4. Then, please key in the default “**User name**” and “**Password**”, both of which are “**admin**”.

Install ActiveX Control

The first time you attempt to view the camera video via Internet Explorer, it will ask you to install the ActiveX component.

If the installation fails, please check the security settings for the Internet Explorer browser.

1. IE → Tools → Internet Options… → Security Tab → Custom Level… → Security Settings → Download unsigned ActiveX controls→ Select "**Enable**" or Prompt.
2. IE → Tools → Internet Options… → Security Tab → Custom Level… →Initialize and script ActiveX controls not marked as safe → Select "Enable" or Prompt.

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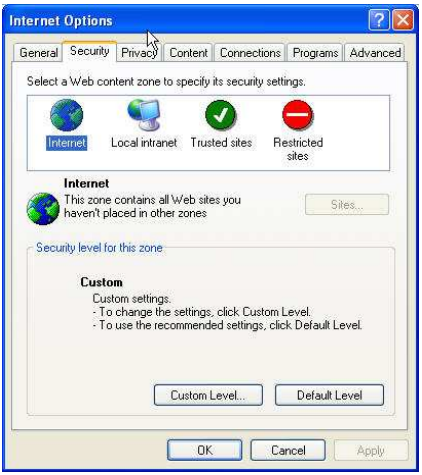

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When the following dialogue box appears, click “**Yes**”.

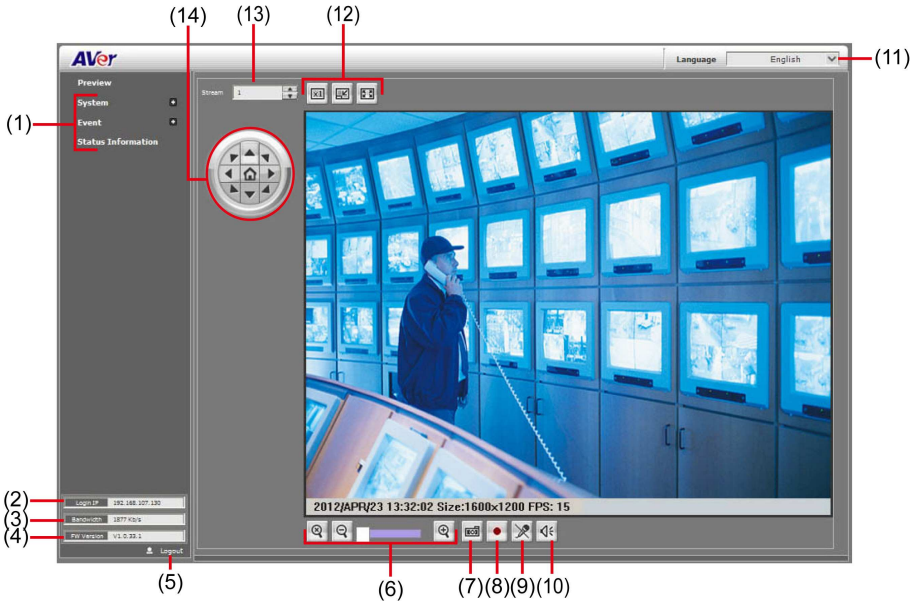
Using the IP Camera Browser Interface

The admin have the full access to the IP Camera browser interface. The menu on the left, you can expand and navigate to access all the features.

Preview

Launch the Internet Explorer browser, type the IP address of the IP camera in the address field. It will show the following dialogue box. Key-in the"**ID**" and "**Password**". The default"**ID**" and "**Password**" are both "**admin**".

Once connected to the IP camera, the following program interface will appear.



Name	Function
(1) System/Event/Status Information	Set up IP camera's configuration.

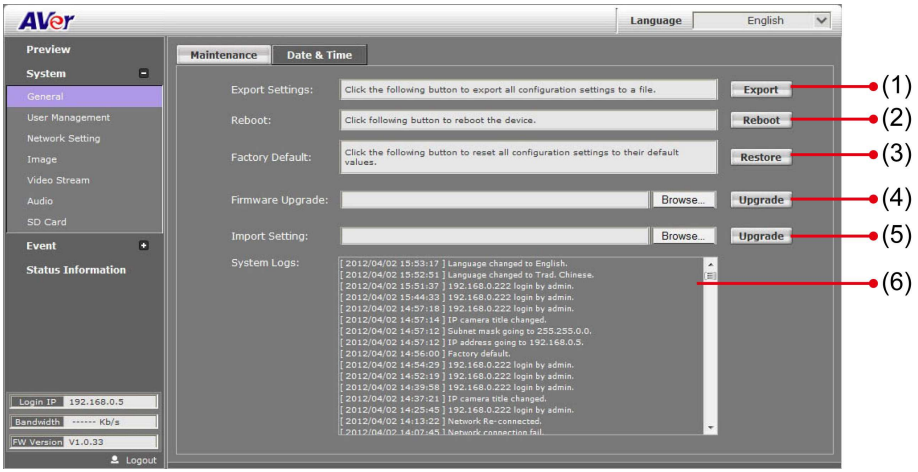
Name	Function
(2) Login IP	Show PC's IP address
(3) Bandwidth	Show current IP camera's transmitting bandwidth
(4) FW Version	Show IP camera's current firmware version
(5) Logout	Exit the application
(6) Zoom control	 Reset zoom level.  Increase zoom level.  Decrease zoom level.  Use the scroll bar to zoom in or zoom out the video screen
(7) Capture	 Capture and save the image on the screen in *.bmp format
(8) Record	 Start/stop audio and video recording. The recorded video will be saved in *.avi format.
(9) 2-way Talk	 Click the Microphone button to talk to IP camera side from user site. Click this button again to mute this function.
(10) Speaker	 Turn on the PC's speaker so that PC side can hear sound from IP camera side. Click this button again to mute this function.
(11) Language	Select the browser interface language.
(12) Video screen	Change the video screen display.  Display the actual video pixel size  Display the video screen in compact size.  Display the video in full screen mode. Press ESC to exit full screen mode.
(13) Stream	Switch to view the video stream type. The IP camera can send multiple video streams of up to 3 types. To change the video stream setting, go to System > Video Stream. **[Notes]**When streaming 2 setting in"**Video Setting**" is closed, there won't have other stream option
(14) Direction Controller	Move the position of the view point while in zoom mode. User has to zoom in first.

System > General

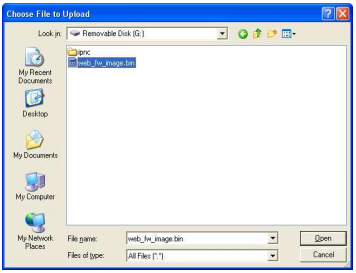
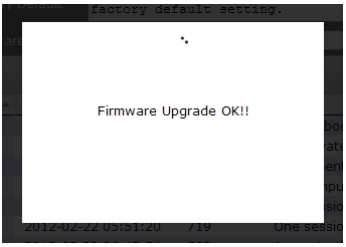
In this section, only admin level is authorized to configure the IP camera system maintenance and the date and time settings.

System > General > Maintenance

In the Maintenance tab, the administrator can check the system event log, upgrade the system firmware, reset the configuration settings without having to change the user management and network settings, reboot, and restore all back to factory default settings.

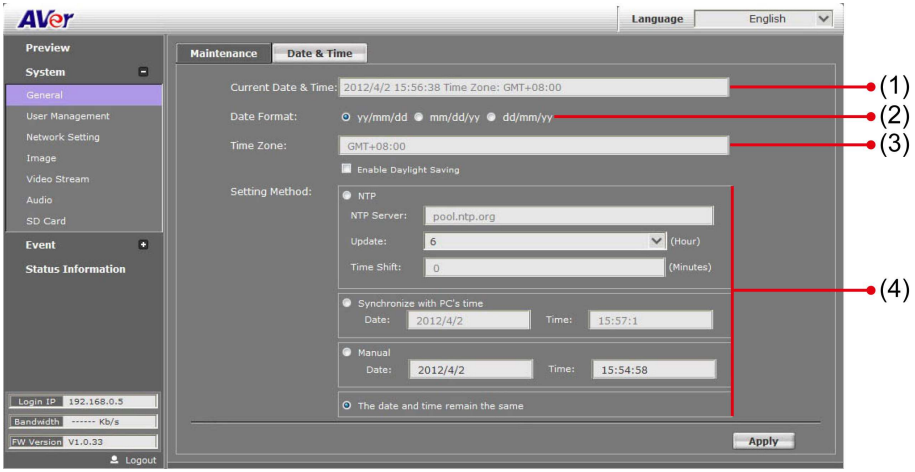


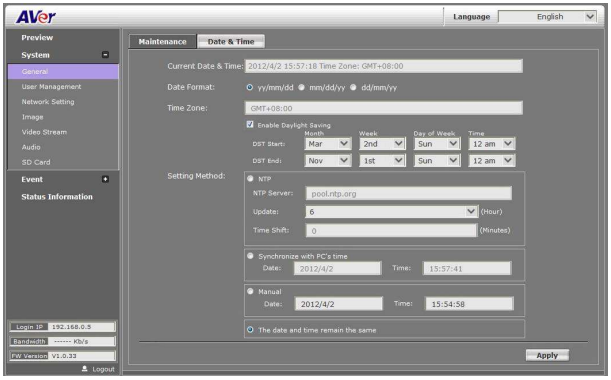
Name	Function
(1) Export Settings	Upload to save all the configuration settings from the IP camera to computer hard disk.
(2) Reboot	Turn the IP camera off and on again.
(3) Factory default	Set all the configuration settings back to default except the user management and network settings.

Name	Function
(4) Firmware Upgrade	Upgrade the firmware to the latest version. **<u>To Upgrade the IP Camera Firmware</u>** 1. Download the file from our website and save it in your computer hard disk. 2. Click Browse. Locate and select the file and click Open. 3. Click Apply. Wait till you see the massage "Firmware Upgrade OK!!". You may now click the Internet Explorer browser refresh button or press F5. The login page will appear.  
(5) Import	Download to replace the current settings with the configuration settings file from the computer hard disk to IP camera.
(6) System log	Display the IP camera system event log.

System > General > Date & Time

In the **"**Date & Time**"** tab, **the** admini**strator** can set and update the system**'s** date and time. After **filling in** the **correct** setting**s**, click **Apply** to apply the new settings.



Name	Function
(1) Current Date & Time	Display the current date and time.
(2) Date Format	Select the date display format.
(3) Time Zone	Set the local time zone. Check the box next to "Enable Daylight Saving" to enable and setup the start date and end date for daylight saving time. 

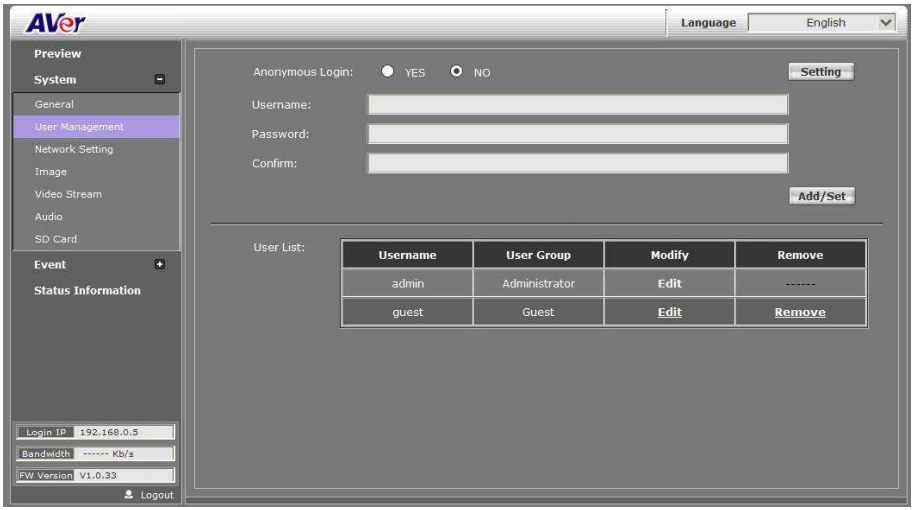
Name	Function
(4) Setting Method	Select the date & time settings method. **Sync with current PC** – Obtain the date and time setting on the current login computer. **Sync with NTP Server** – Obtain the date and time setting from NTP server. In the drop-down list, select the NTP host name. **Manual** – Manually set the date and time. Click "**Done**" to close the date and time interface.

System > User Management

In this section, only admin level is authorized to create, delete, and edit the account in Account tab and configure the client connection setting in Connection tab.

System > User Management > Account

IP camera supports two different user accounts – Administrator (Admin) and Guest User.



User Type	Access Rights
Admin	Can access all the configuration pages
Guest User	Can only access the preview and status information pages.

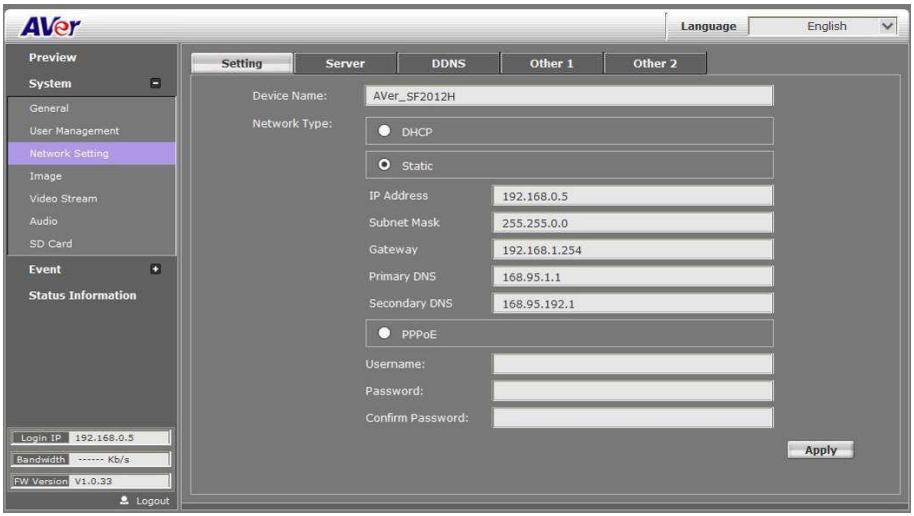
- **Anonymous User Login**
  - ✓ **Yes:** Allow an anonymous user to view the IP camera without logging in.
  - ✓ **No:** Need user name & password to access this IP camera
- **Add user:** Enter the user name in "**Username**", the password in "**Password**", and re-enter the

password in “**Confirm**”. Then, click “**Add/Set**”.

- **User List:** Click **edit** to change the account password. To delete the user account, click **Remove** button.

System > Network Setting>Setting

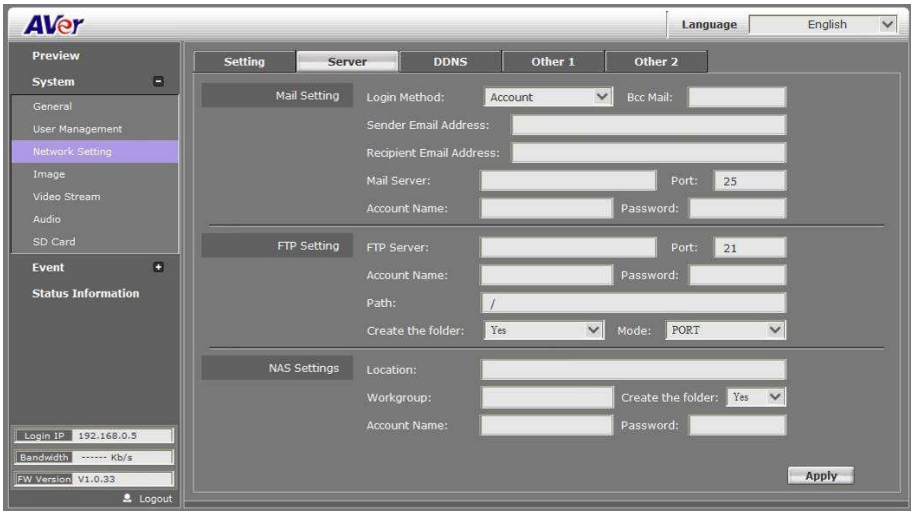
- **Device Name:** Used to name the IP camera to search more easily for this specific one among all connected IP cameras.



- **Network Type:** IP camera supports DHCP, static IP and PPPoE. After completed all settings, click **Apply** to save the configuration.
  - **DHCP:** Using DHCP, IP camera will get all the network parameters from DHCP server automatically.
  - **Static IP:** Please enter the IP address, subnet mask, gateway, Primary DNS, and Secondary DNS.
  - **PPPoE:** Enter the **Username**, **Password** and re-enter Password in **Confirm Password** for the ADSL connection. And then click **Apply** to save the configuration.

System > Network Setting>Sever

Used to send out the video via Email or FTP, or to save on NAS.

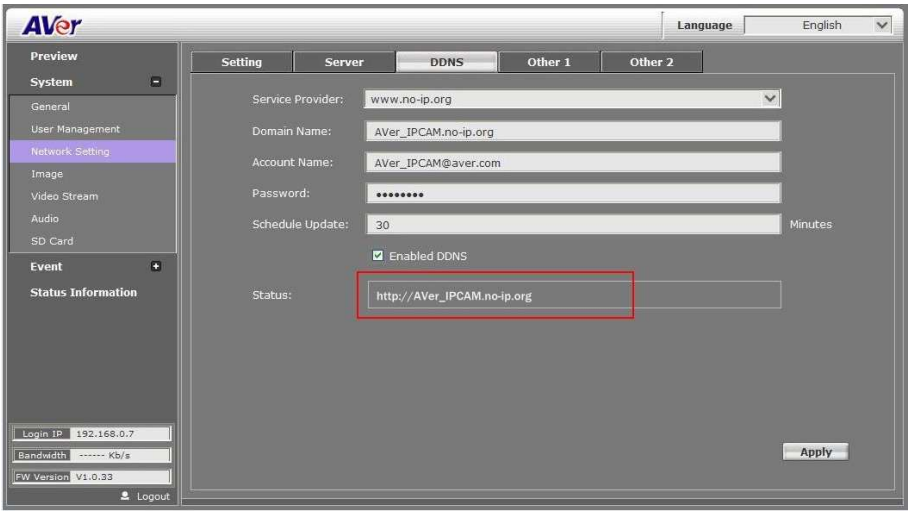


- **Mail Setting:** Used to send out the video via Email.
  a. **Login Method:** Click drop-down list to select the method to login Email server – "**Account**" or "**Anonymous**".
  b. Enter necessary information in "**Bcc Mail**", "**Sender Email Address**", "**Recipient Email Address**", "**Mail Server**", "**Mail Server Port**", "**Account Name**", and "**Password**" columns.
  c. Click "**Apply**" to save the configuration.
- **FTP Setting:** Used to send out the video to FTP server.
  a. Enter necessary information in "**FTP Server**", "**Account Name**", "**Password**", and "**Path**" columns.
  b. **Port:** Select the FTP server port.
  c. If the user wants to create a new folder on the FTP server to save the video file, select "**Yes**" under the "**Create the folder**".
  d. **Mode**: Select the FTP transmission mode.
  e. Click "**Apply**" to save the configuration.

- **NAS Settings:** Used to send out the video to NAS server.
  a. Enter necessary information in "**Location**", "**Workgroup**", "**Account Name**" and "**Password**" columns.
  b. If the user wants to create a new folder on the NAS server to save the video file, select "**Yes**" under the "**Create the folder**".
  c. Click "**Apply**" to save the configuration.

System > Network Setting>DDNS

The IP camera supports DDNS (Dynamic DNS) service.



a. Select "**Enabled DDNS**" to enable DDNS function.
b. Enter the **Domain Name**, **Account Name**, and **Password** that the user has registered on the DDNS service provider in the appropriate columns.
c. Enter the IP refreshing time period in the "**Schedule Update**" column.
d. Click "**Apply**" to save the configuration.

[Note] If you set up schedule update to occur too frequently, the IP may be blocked. In general, performing schedule update once a day (1440 minutes) is recommended.

■ **Status**

- **Common warning message:**

  Updating!
  Failed(1), Please check your DNS setting.
  Failed(2), Please check your internet connection.
  Failed(3), Please check your internet connection.
  Failed(6), receiving data failure

- **Warning message from different service provider:**

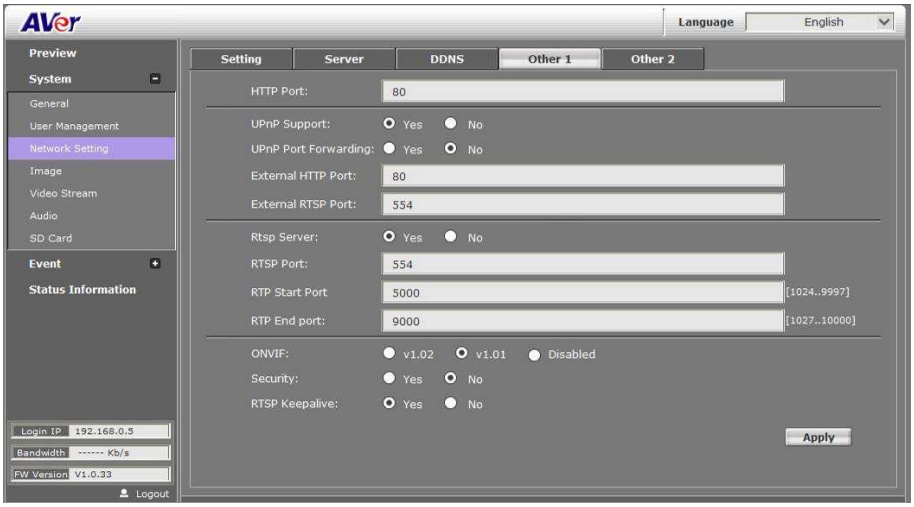
  ✧ **Server Provider : dyndns.org**
  Failed(4),Please check the Dyndns.org.
  Error : The system parameter given is not valid.
  Error : No user agent was specified.
  Error : The username and password pair do not match a real user.
  Error : An option available only to credited users was specified.
  Error : Not in the form hostname.domain.org or domain.com.
  Error : The hostname specified does not exist.
  Error : Not under the username specified.
  Error : Too many or no hosts specified in an update.
  Error : The hostname specified is blocked for update abuse.
  Error : DNS error encountered.
  Error : DNS Server Error Conditions.

  ✧ **Server Provider : ddns.camddns.com(TW)**
  Failed(5), The name has already been registered.

  ✧ **Server provider : ddns.ipddn.com(HK)**
  Failed(5), The name has already been registered

  ✧ **Server provider : www.3322.org.**
  Failed(4), Please check the www.3322.org.

System > Network Setting >Other 1



User may need to assign different port to avoid conflict when setting up IP assignment. Click **Apply** to save the configuration.

- **HTTP Port:** setup web page connecting port and video transmitting port (Default: 80)
- **UPnP Support:** This IP camera supports UPnP, if this service is enabled on your computer, the camera will automatically be detected and a new icon will be added to “My Network Places.”

  [Note] UPnP must be enabled on your PC.

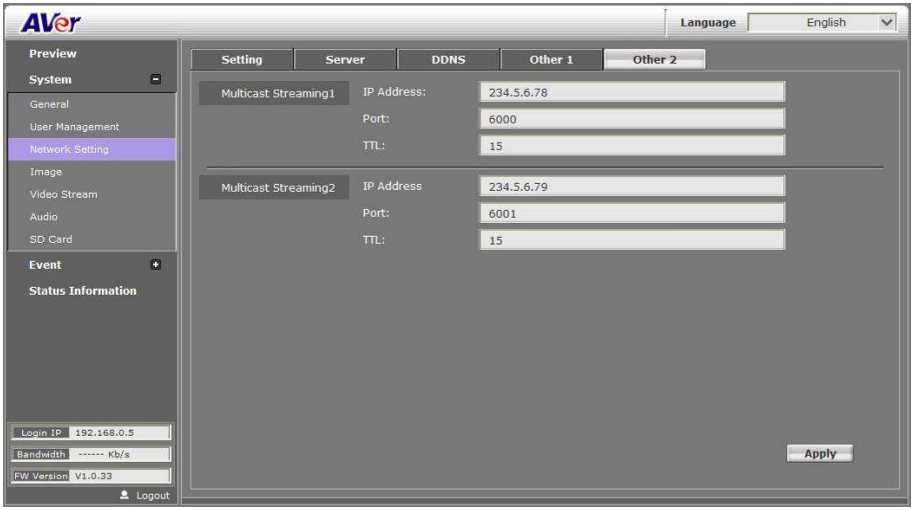
  Please follow the procedure to activate UPnP.

  1. Open the **Control Panel** from the Start Menu.
  2. Select **Add/Remove Programs**.
  3. Select Add/Remove Windows Components and open Networking Services section.
  4. Click **Details** and select **UPnP** to setup the service.
  5. The IP device icon will be added to “**My Network Places**”.
  6. User may double click the IP device icon to access IE browser.
- **UPnP Port Forwarding:** If the IP camera is set up behind the firewall, please select YES to enable it.
- **RTSP Server:** Enable/disable RTSP function. The Real Time Streaming Protocol (RTSP) is a network control protocol designed for use in entertainment and communications systems to control streaming media servers.
- **RTSP Port:** setup port for RTSP transmitting (Default: 554)
- **RTP Start and End Port:** in RTSP mode, you may use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTP Start and End Port.
- **ONVIF:** User can enable ONVIF standard and select the ONVIF version or disable it.

- **Security: Yes** is required account and password to connect with this IP camera through ONVIF protocol. **No** is not required account and password to connect. (Make sure the NVR system supports ONVIF v1.02.)
- **RTSP Keepalive:** To keep connection until remote site disconnects it.

System > Network Setting >Other 2

Multicast Setting (based on the RTSP Server): User can setup two streaming based on the RTSP Server.



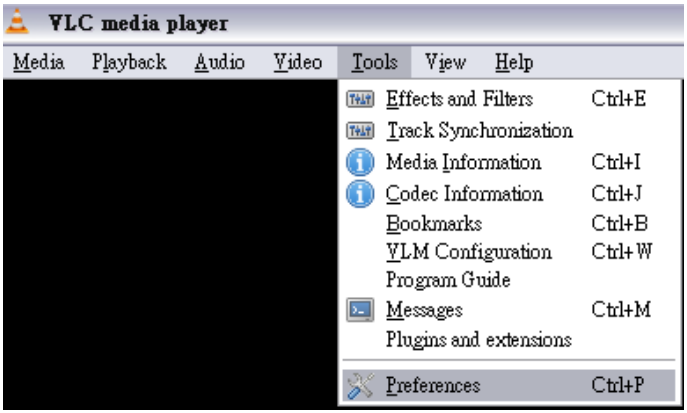
Multicast operation example:

The application is to get the multicast streaming in the LAN environment. Basically, the users operate VLC player, and then you can get the multicast streaming form IP camera.

Please follow the steps to obtain the multicast streaming in the following steps:

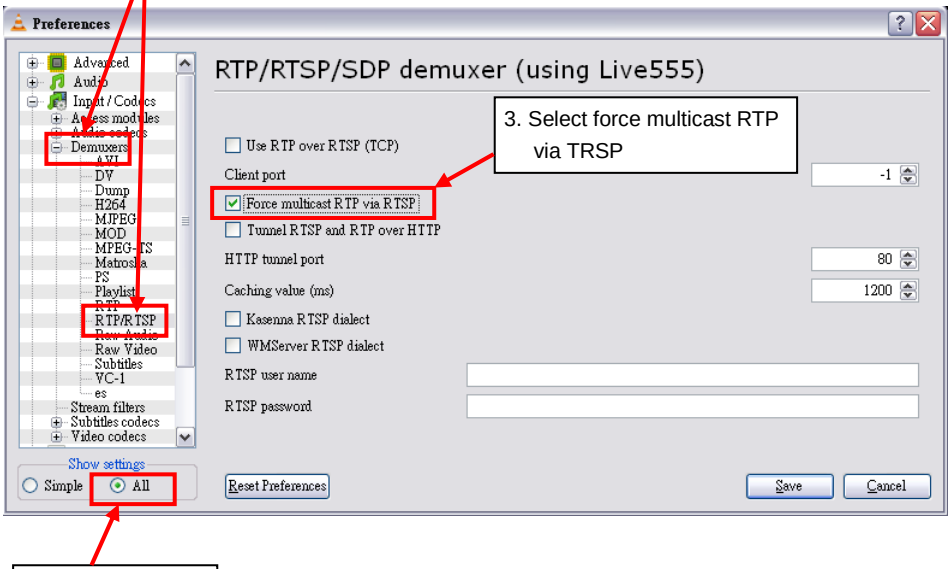
Step 1:

1. Implement VLC player (please download from the internet)
2. Select /tools/preferences



Step 2:

2. Select Demuxers and RTP/RTSP

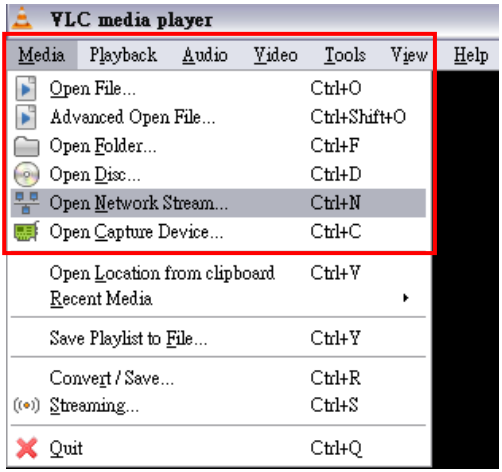


3. Select force multicast RTP via TRSP

1. Select all

Step 3:

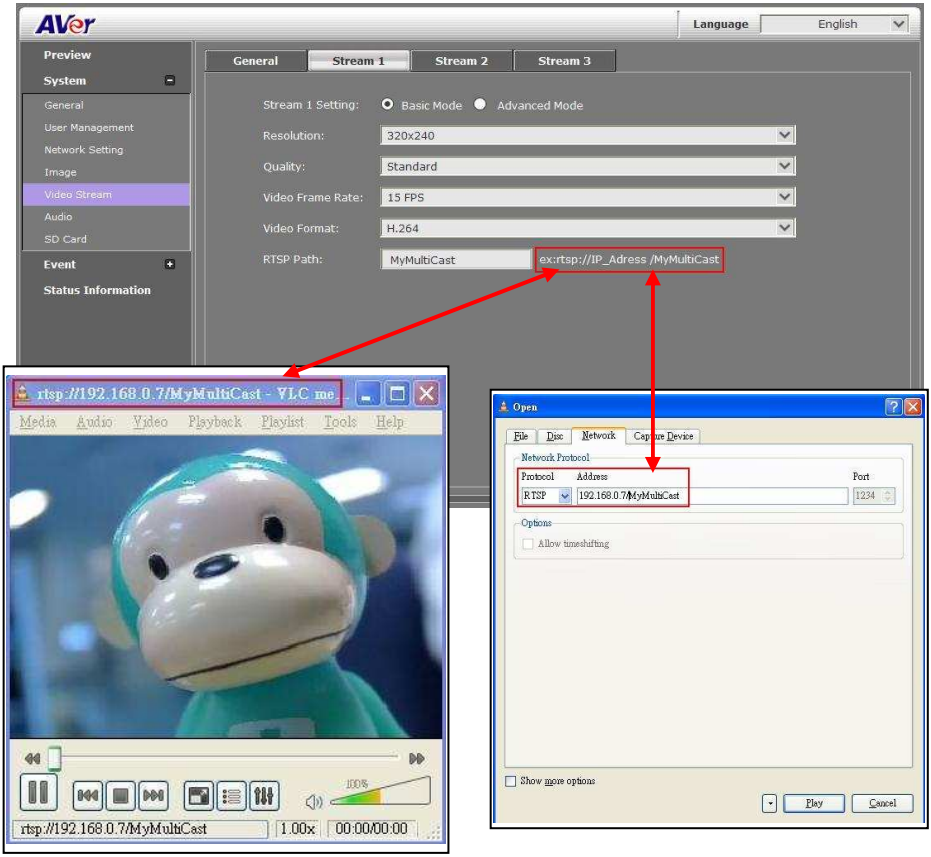
Select Media/open network stream



Step 4:

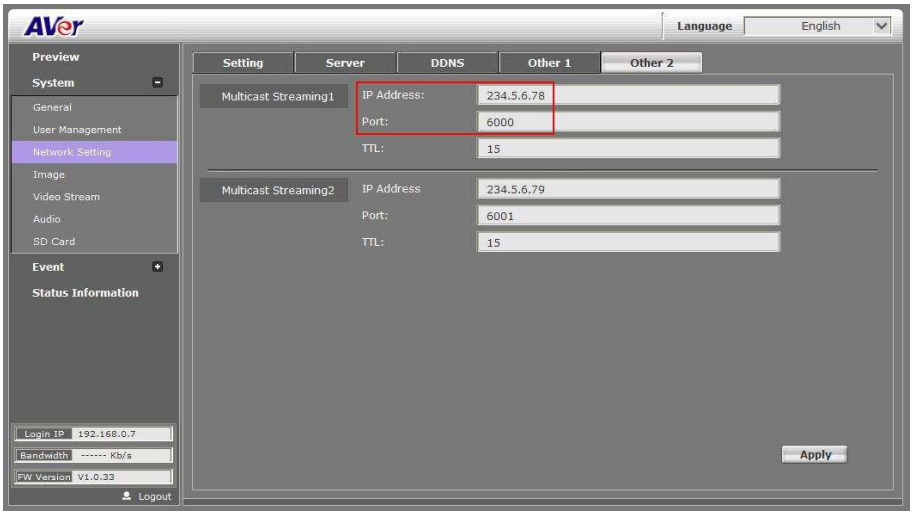
Input **rtsp://[IPCAM Address] / [RTSP Path]**

The URL address should be the same as the RTSP path in Video Stream (System-->Video Stream)

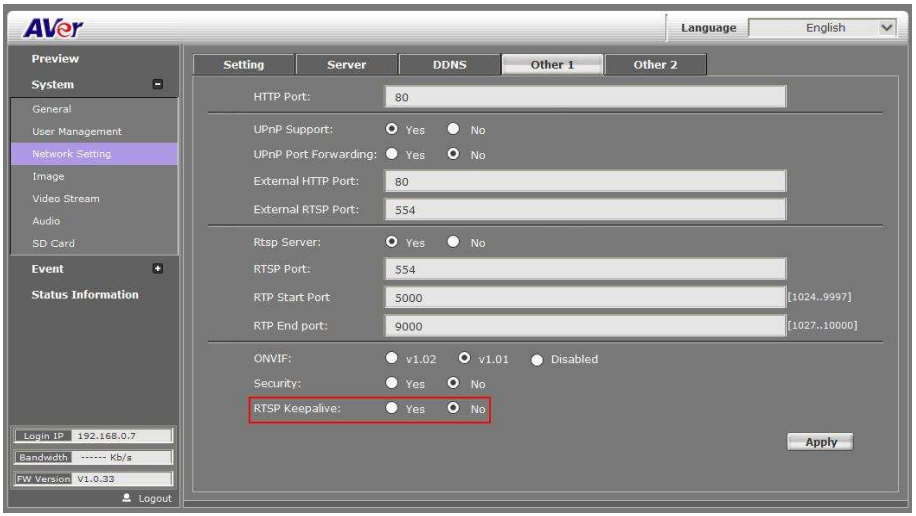


[Notice]

a. If the received image is not from the required IP camera, please adjust the value. (Change either IP Address or Port number)



b. If the Multicast stream you use doesn't support RTSP Keepalive, please select NO.



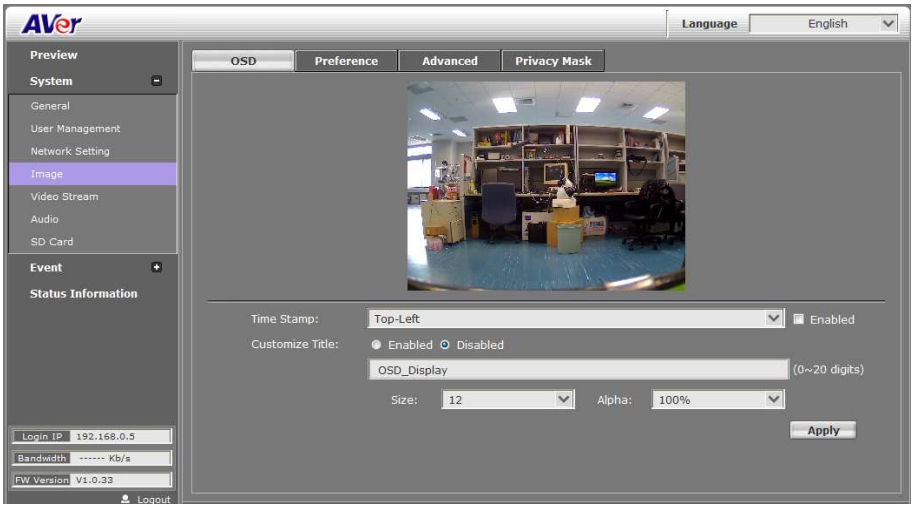
System > Image

Admin and operator levels can adjust the Image setting. There are 5 tabs: OSD, Preference, Exposure, Advanced, and Privacy Mask

System > Image>OSD

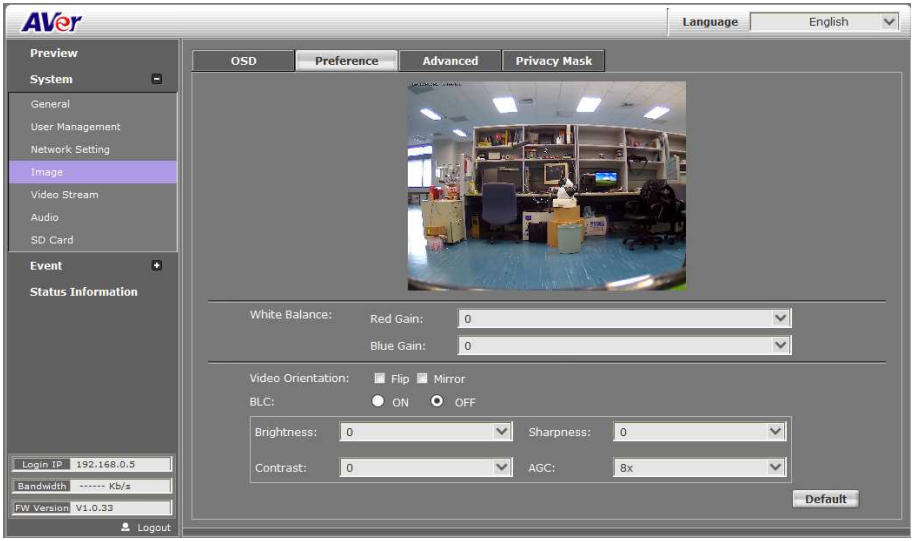
In OSD tab, you can enable/disable overlaying time stamp and text title. After completing the setting, click Save to apply the new setting and Cancel to keep the new setting.

- **Time Stamp:** Mark **Enable** check box and select a position where date and time stamp / text to display on video screen.
- **Customize Title:** Click **Enabled** can adjust the OSD contents which are including **Size** and **Alpha** of text.



System > Image>Preference

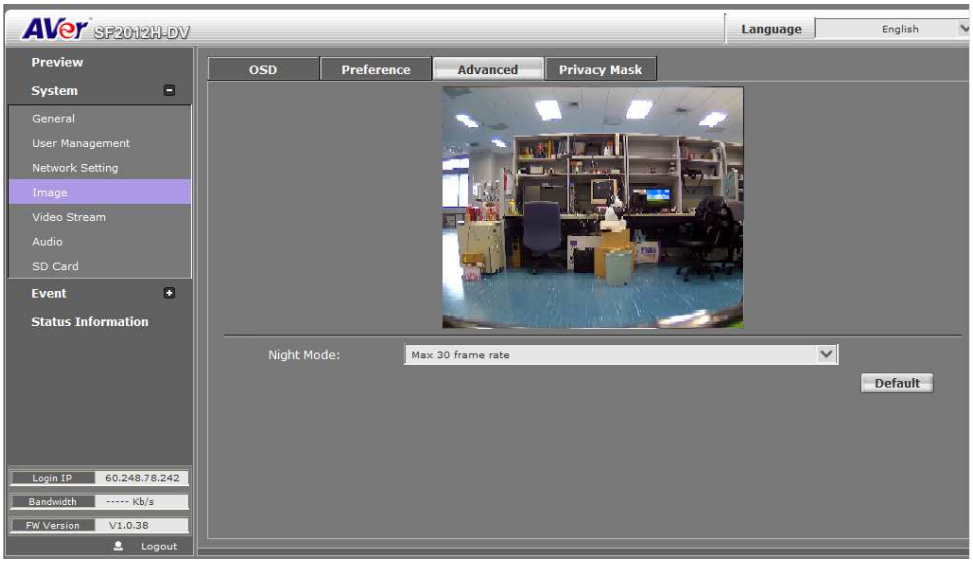
In Preference tab, you can tune the IP camera white balance, display color or black & white, set the flicker frequency, change the video orientation, and adjust the brightness and contrast. After completing the setting, click Save to apply the new setting and Cancel to keep the new setting.



- **White Balance:** Adjust white balance value.
- **Video Orientation:** To **Flip** or **Mirror** the video on screen.
- **BLC:** The IP camera supports "**Back Light Compensation**". **Yes** is turn on and **No** is turn off the BLC function.
- Adjust "**Brightness**", "**Contrast**", "**Hue**", "**Saturation**" to get clear video.

System > Image>Advanced

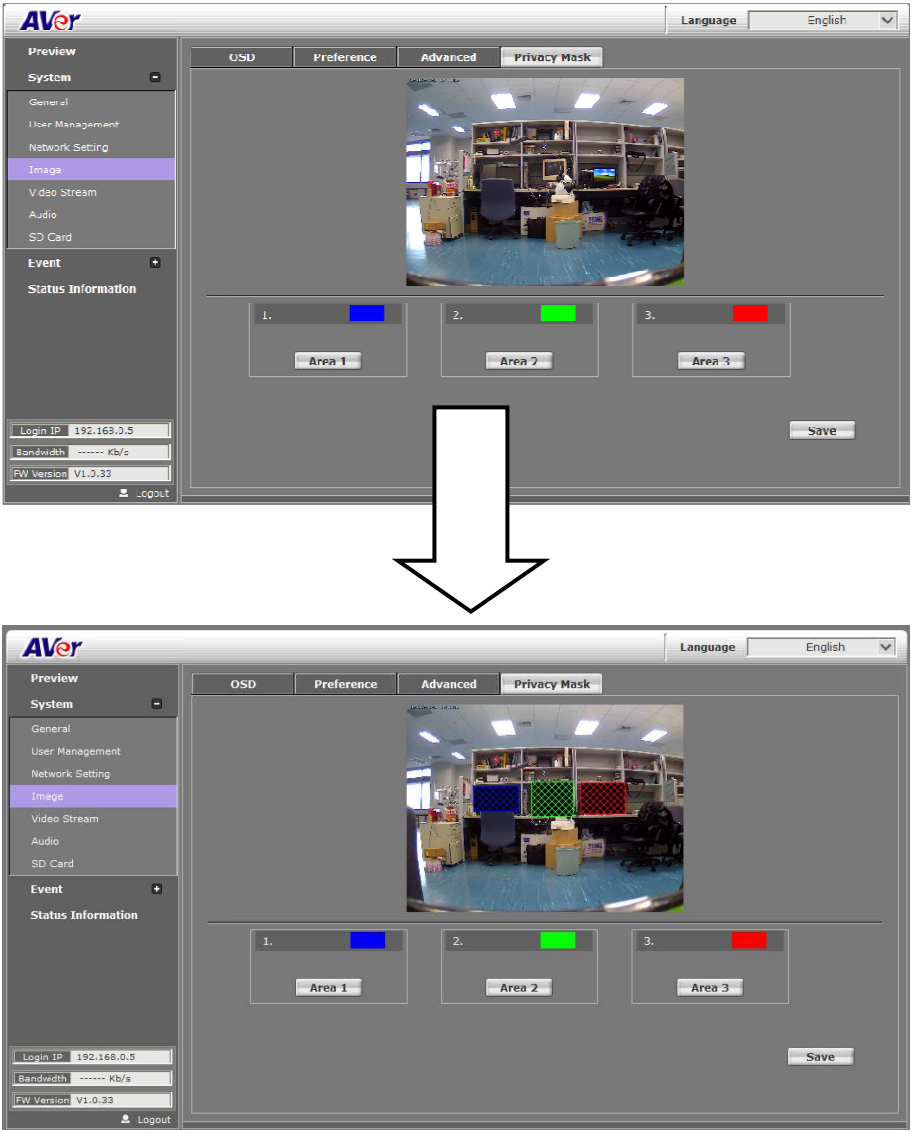
Click **Default** button will back to factory default setting.



- **Night Mode:** select the setting of night mode.

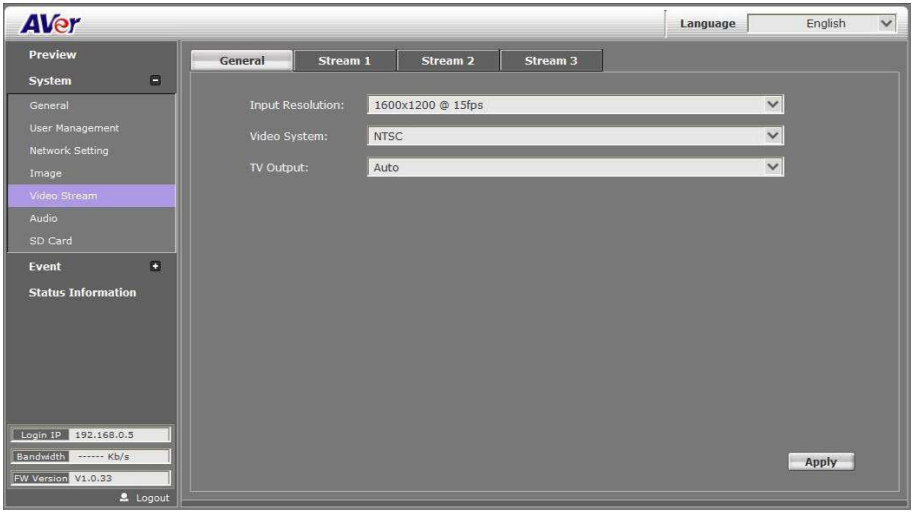
System > Image>Privacy Mask

For the security purpose, there are three areas can be setup for privacy mask. Click Area #(Area 1, Area 2, Area 3)button first and drag a area on the image screen. Then, click **Save** button to save the setting.



System > Video Stream>General

- **Input Resolution:** Select the video resolution that is the maximum resolution supported in Stream 1 and Stream 2.
- **Video System:** Select the video format.
- **TV Output:** Select the video format of TV Output. (depending on different models)



System > Video Stream>Stream1

- **Basic Mode**

  Click **Apply** to save the configuration.

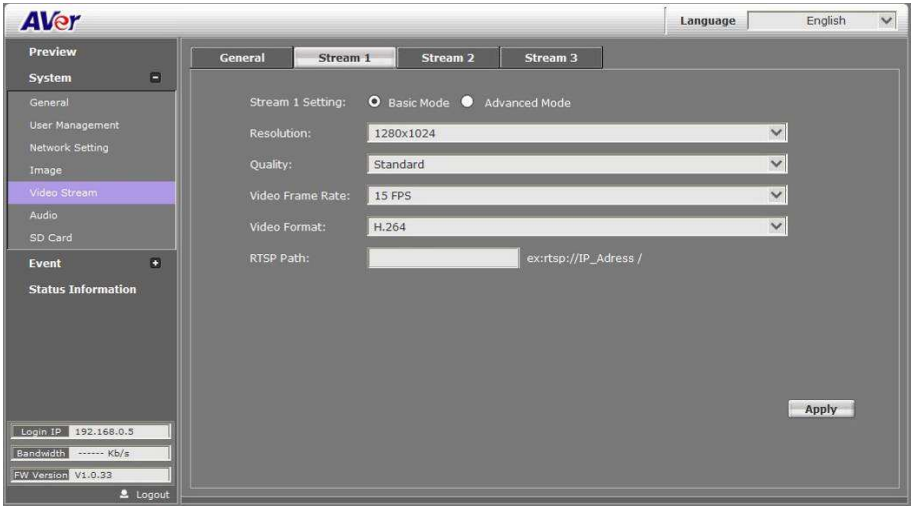
  – **Resolution:** There are 8 resolutions can be chosen -- 1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144.

  – **Quality:** There are 5 levels to adjust – Best, High, Standard, Medium, and Low. The higher the quality is, the bigger the file size is. Also not good for internet transmitting.

  – **Video Frame Rate:** The video refreshing rate per second.

  – **Video Format:** H.264 or JPEG.

  – **RTSP Path:** It's a URL address.



- **Advanced Mode**

  Click **Apply** to save the configuration.

  – **Resolution:** There are 8 resolutions can be chosen.1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144.

  – **Rate Control:** There are CBR (Constant Bit Rate) and VBR (Variable Bit Rate) to use.

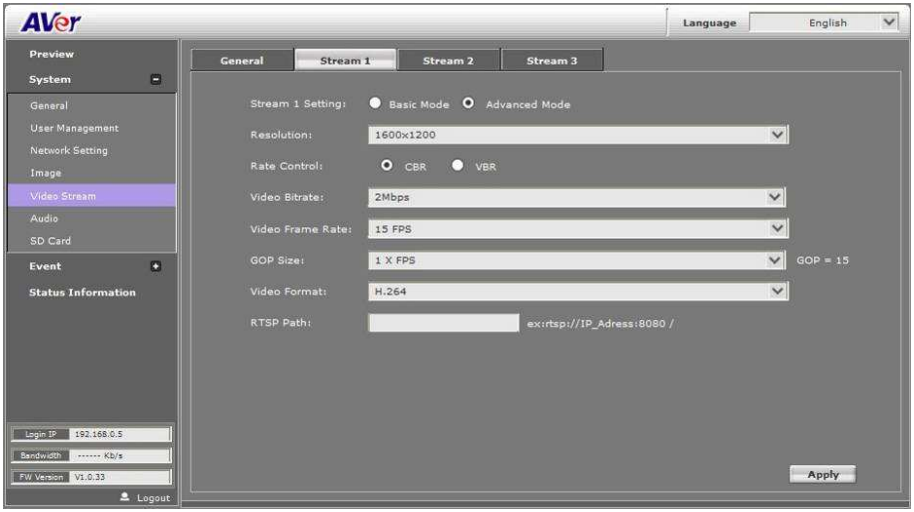
  ✓ **CBR:** 32Kbps~8Mbps (the higher the CBR is, the better the video quality is).

  ✓ **VBR:** 1(Low) ~10(High) – Compression rate, the higher the compression rate, the better the picture quality is; vise versa. The balance between VBR and network bandwidth will affect picture quality. Please carefully select the VBR rate to avoid picture breaking up or lagging.

  – **Video Frame Rate:** The video refreshing rate per second.

  – **GOP Size:** It means "**Group of Pictures**".

- **Video Format:** H.264 or JPEG
- **RTSP Path:** It's a URL address



System > Video Stream>Stream2

- **Basic Mode**

  Click **Apply** to save the configuration.

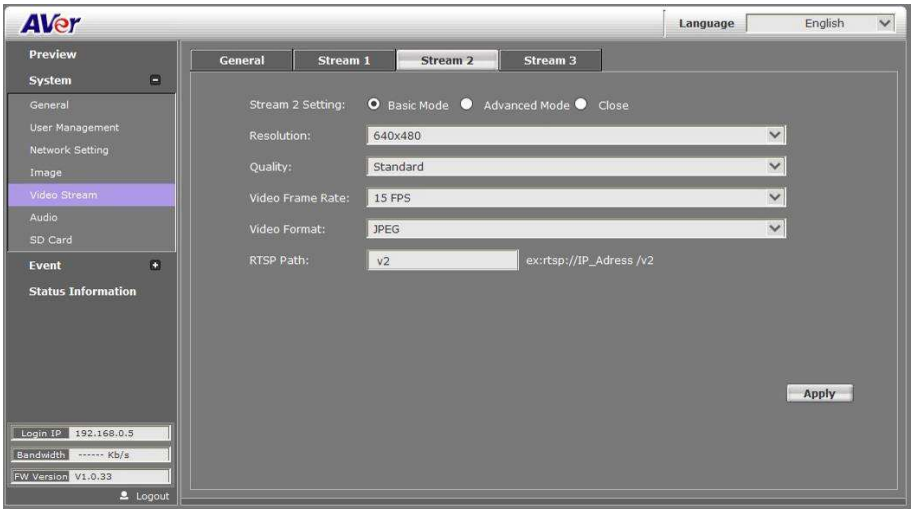
  – **Resolution:** There are 8 resolutions can select -- 1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144.

  – **Quality:** There are 5 levels to adjust – Best, High. Standard, Medium, and Low. The higher the quality is, the bigger the file size is. Also not good for internet transmitting

  – **Video Frame Rate:** The video refreshing rate per second.

  – **Video Format:** H.264 or JPEG

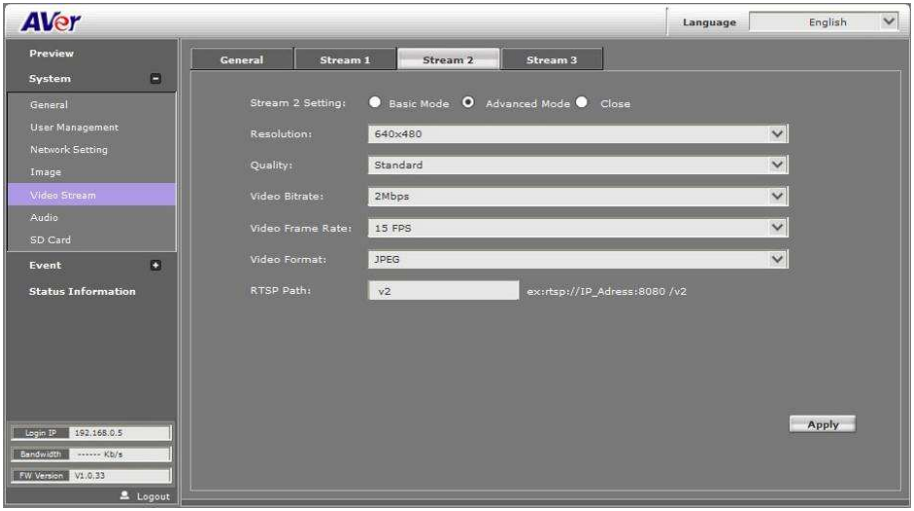
  – **RTSP Path:** It's a URL address



- **Advanced Mode**

  Click **Apply** to save the configuration.

  - **Resolution:** There are 8 resolutions can select -- 1600x 1200, 1280x1024, 1280x960, 1280x720, 800x600, 640x480, 320x240, 176x144.
  - **Quality:** There are 5 levels to adjust – Best, High. Standard, Medium, and Low. The higher the quality is, the bigger the file size is. Also not good for internet transmitting.
  - **Video Bitrate:** Select the bitrate of video.
  - **Video Frame Rate:** The video refreshing rate per second.
  - **Video Format:** H.264 or JPEG.
  - **RTSP Path:** It's a URL address

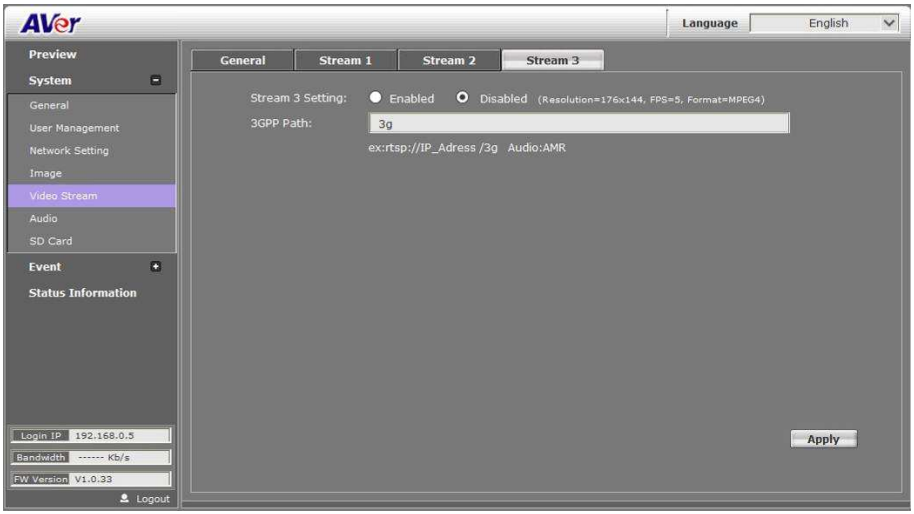


- **Close:** To close the stream 2. Click **Apply** to save the configuration.

System > Video Stream>Stream3

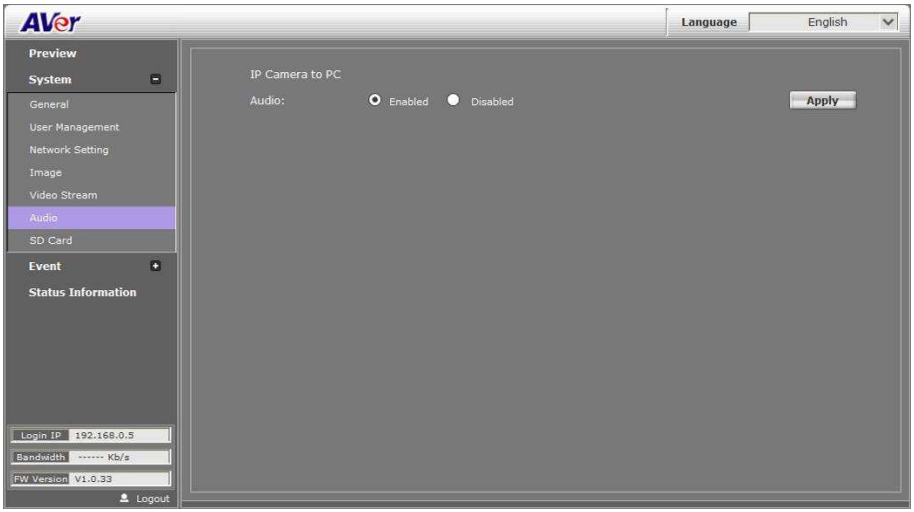
[Note] 3GPP mode suggested setting: 176x144 resolution, 5FPS, MPEG4 format.

- **Stream 3 Setting: Enable** or **Disable** 3GPP Streaming.
- **3GPP Path:** It's a URL address.



System > Audio

IP camera supports 2-way audio (mono). User can send audio from IP camera built-in MIC (depending on different models) to remote site; User can also send audio from remote site to IP camera's external speaker.

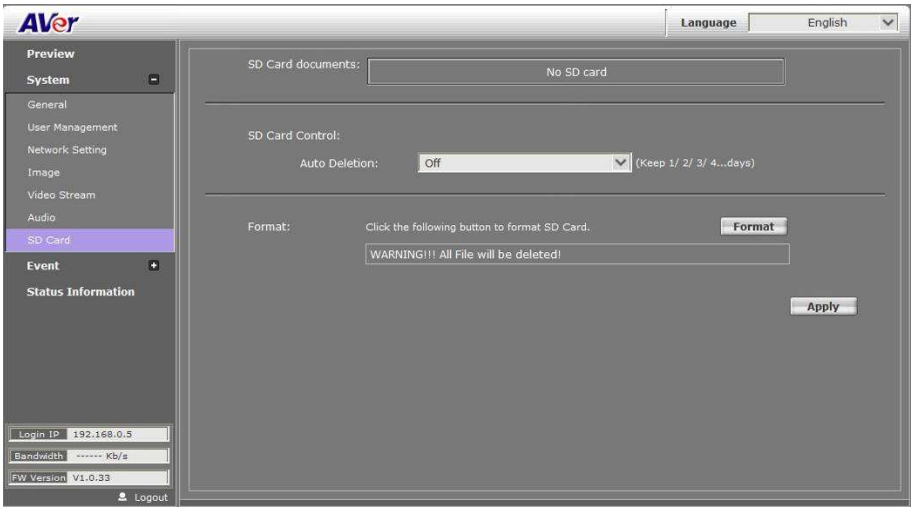


a. IP camera to PC: select "**Enable**" to start this function.

b. In live video screen, click  button to start chatting. Press again to mute. Click  button to turn on or off the speaker of PC.

[Note] The Audio will not be smooth when enable SD/SDHC card recording function simultaneously.

System > SD Card



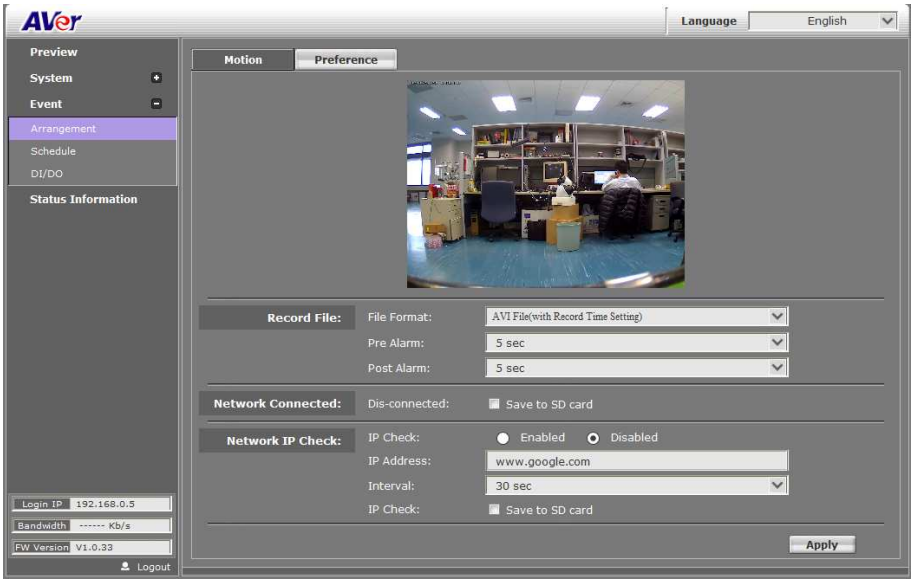
Please insert micro SD/SDHC card before using it. Make sure pushing micro SD/SDHC card into the slot completely.

[Note]The use of the micro SD/SDHC card will affect the operation of the IP camera slightly, such as affecting the frame rate of the video.

Event > Arrangement>Motion

Motion Detection: IP camera allows 3 areas motion detection. When motion is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD/SDHC card. To set up the motion area 1, click "**Area 1**" button. Using mouse to drag and draw the area. The same operation for area 2 and 3. (The higher the sensitivity value is, the more sensitive to trigger event.)

Event > Arrangement > Preference



- **Record File:**
  - **File Format:** IP camera allows 3 different types of recording file to change its record size. When motion/alarm is triggered, there are 3 different types of record mode.
    - AVI File (With Record File Setting)
    - JPEG Files (With Record File Setting), only with M-JPEG compression format.
    - Single JPEG (Single File with Interval Setting)(JPEG photo).
  - **Pre Alarm and Post Alarm:** Setups for video start and end time when motion detected, I/O, or other devices got triggered.

  [Note] Pre/Post Alarm record time is base on record time setting and IP camera built-in Ram memory. Limited by IP camera built-in Ram Memory, When information is too much or video quality set too high, it will cause recording frame drop or decrease on post alarm recording time.

- **Network Connected:** When the network is down, it will save the video to local SD/SDHC card.

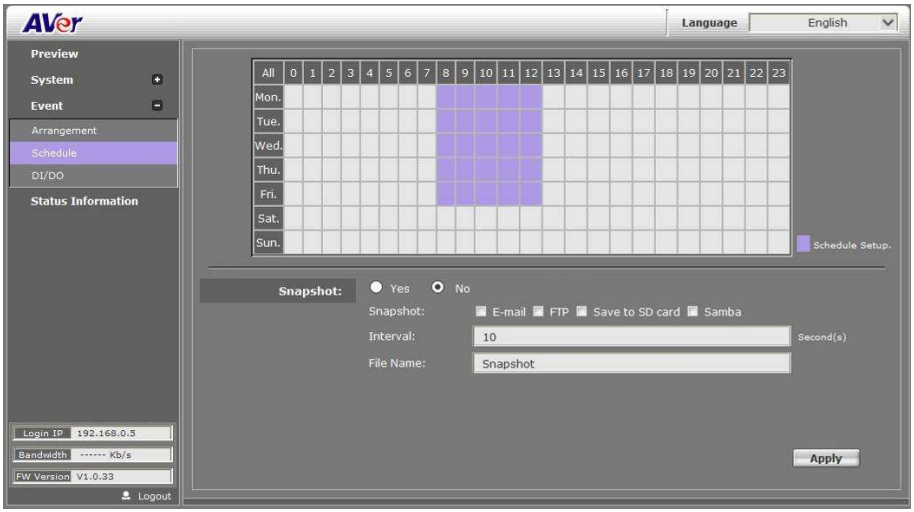
[Note]This function is only enabled in wire connection.

- **Network IP check:** When the connection is down, it records the **video** to SD/SDHC card. Make sure the video recording is continuous. To use this function, key in the IP address of the PC which has recording software installed. Enable the function of "**Save to SD card**", then click "**Apply**".

[Note] The interval of two video files on SD/SDHC card is fixed with 30 seconds.

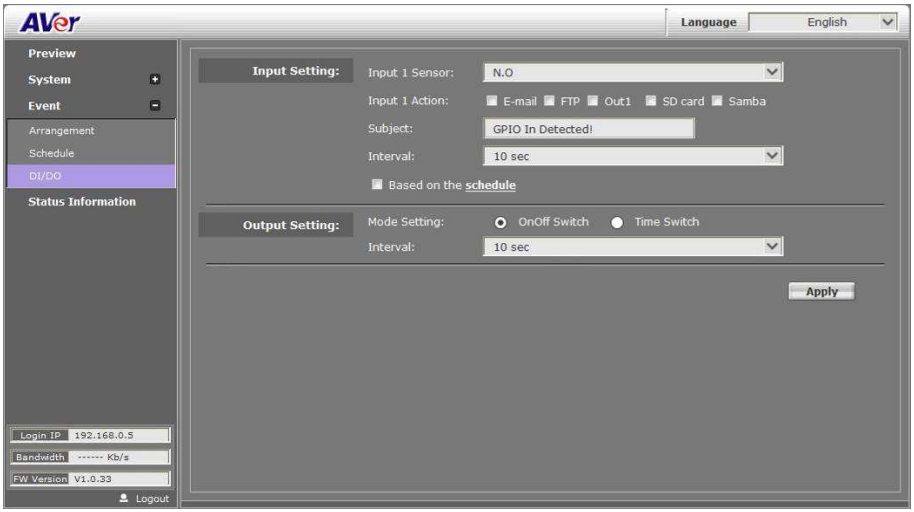
Event > Schedule

- **Schedule:** After complete the schedule setup, the camera data will be recorded according to the schedule setup.
- **Snapshot:** After enable the snapshot function; user can select the storage position of snapshot file, the **Interval time** of snapshot and the reserved **File Name** of snapshot.



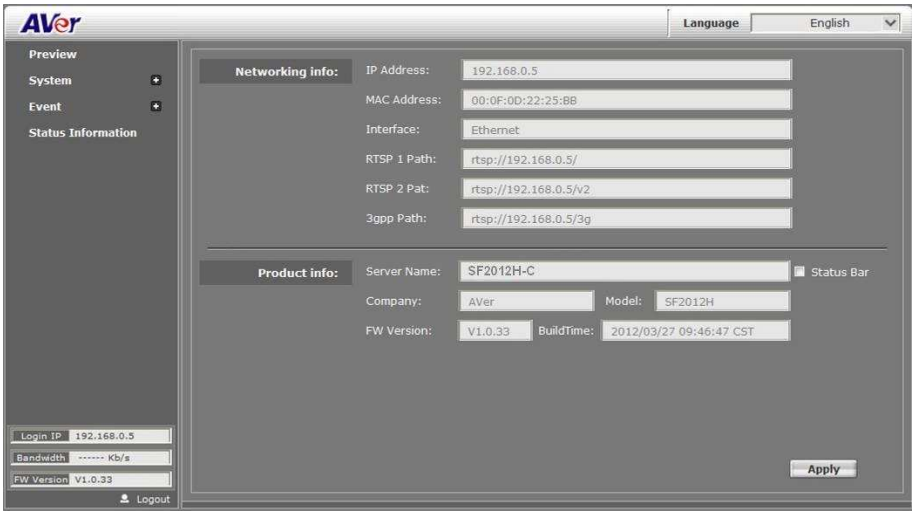
Event > DI/DO

IP camera supports 1 input/1 output (depending on different models). When input is triggered, it can send the video to some specific mail addresses, transmit the video to remote ftp server, trigger the relay, and save video to local SD/SDHC card.



Status Information

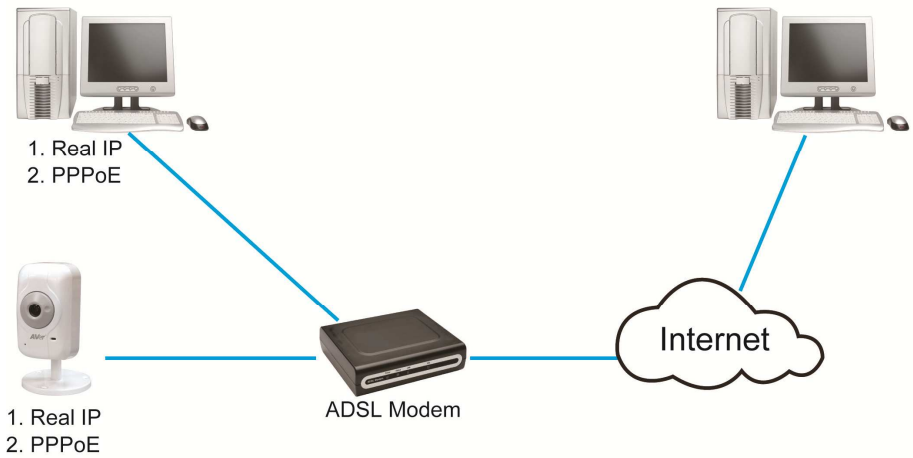
Click **Apply** button to save the configuration.



- **Networking Info:** Displays network information of the IP camera.
- **Product Info:** Assigns a name to the IP camera and the name shows on the IP Installer. Also, displays the related information of the IP camera. Mark **Status Bar** to display the Server Name of IP camera on preview interface.

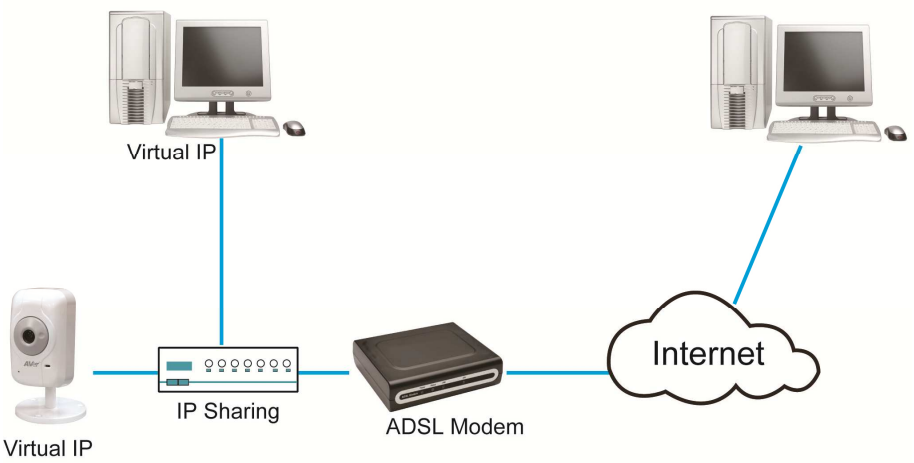
Network Configuration

■ Configuration 1



a. Internet Access: ADSL or Cable Modem
b. IP address: More than one real IP
c. IP camera and PC connect to the internet
d. For fixed real IP, set up the IP into IP camera and PC. For dynamic IP, start PPPoE.

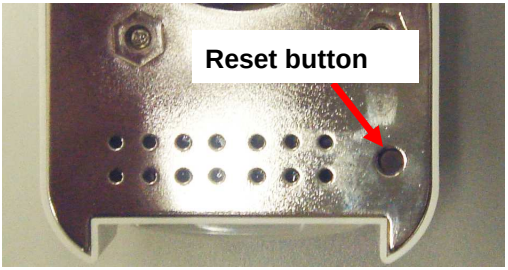
■ Configuration 2



a. Internet Access：ADSL or Cable Modem
b. IP address：one real IP
c. IP camera and PC connect to the internet
d. Device needed：IP sharing
e. Use virtual IP, set up port forwarding in IP sharing.(Please refer to Network Setting→Other 1→UPnP Port Forwarding)

Factory Default

1. To recover the default IP address and password, please follow the following steps.
2. Remove power, and press and hold the button in the back of IP camera.



3. Power on the camera. Don’t release the button during the system booting.
4. It will take around 30 seconds to boot the camera.
5. Release the button when camera finishes proceed.
6. Re-login the camera using the default IP (**192.168.1.200**), and user name (**admin**), password (**admin**).

Troubleshooting

Here are some useful tips on how to solve some common problems.

Problem	Solution
I forgot the account and password for SF2012H-C. How can I go back to default setting?	Please refer to the manual of “VI Factory Default setting” description.
I can’t find a way to force day mode and night mode. Is this possible and how.	We don't provide this function due to the limitation of hardware.
What is the night mode setting does, under camera setting page, with option to choose frame rate. Any way to check the shutter speed and settings?	Night mode means slow shutter and you increase the shutter to make the object more bright. However, the weakness is that the frame rate would be reduced.
I recorded video file in H.264 file format but failed to playback on Media Player (V.9).	Default Windows Media Player doesn’t have H.264 decoder so that you can’t playback the file successfully. Please install K-Lite program in advance or install KMPlayer or VLC program to playback the video file. You can search those free program on Internet.

Appendix

SF2012H-C is compliant with Micro SD/SDHC card and to ensure recording quality, and please use memory cards over 2G and Class 4 above (Max. 32G).

Micro SD/SDHC card	SD/SDHC
Transcend SDHC class4 16GB	Transcend SDHC Class 4 16GB
Transcend SD class4 16GB	Transcend SD Class 4 16GB
Transcend SDHC class4 32GB	Transcend SDHC Class 4 32GB
Transcend SD class4 32GB	Transcend SD Class 4 32GB
Transcend SD class6 4GB	Transcend SD Class 6 4GB
Transcend SDHC class6 4GB	Transcend SDHC Class 6 4GB
Transcend SD class6 8GB	Transcend SD Class 6 8GB
Transcend SDHC class6 8GB	Transcend SDHC Class 6 8GB
Transcend SD class6 16GB	Transcend SD Class 6 16GB
Transcend SDHC class6 16GB	Transcend SDHC Class 6 16GB
Transcend SDHC class10 4GB	Transcend SDHC Class10 4GB
Transcend SDHC class10 8GB	Transcend SDHC Class10 8GB
Transcend SDHC class10 16GB	Transcend SDHC Class10 16GB
SanDisk SDHC class4 4GB	SanDisk SDHC Class 4 4GB
SanDisk SDHC class4 8GB	SanDisk SDHC Class 4 8GB
SanDisk SDHC class4 16GB	SanDisk SDHC Class 4 16GB
SanDisk SDHC class4 32GB	SanDisk SDHC Class 4 32GB

- SF2012H/SF2012H-D/SF2012H-B: SDHC/SD card
- SF2012H-DV/SF2012-C: microSDHC/SD card
- **For SF2012H-B, the SD card must be installed at factory side. Users are not allowed to install cards by themselves. Otherwise, it will be out of warranty**

FCC NOTICE (Class B)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission Statement

NOTE- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

European Community Compliance Statement (Class B)

This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2004/108/EC.

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WARNING

TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. WARRANTY VOID FOR ANY UNAUTHORIZED PRODUCT MODIFICATION.

THE MARK OF CROSSED-OUT WHEELED BIN INDICATES THAT THIS PRODUCT MUST NOT BE DISPOSED OF WITH YOUR OTHER HOUSEHOLD WASTE. INSTEAD, YOU NEED TO DISPOSE OF THE WASTE EQUIPMENT BY HANDING IT OVER TO A DESIGNATED COLLECTION POINT FOR THE RECYCLING OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT. FOR MORE INFORMATION ABOUT WHERE TO DROP OFF YOUR WASTE EQUIPMENT FOR RECYCLING, PLEASE CONTACT YOUR HOUSEHOLD WASTE DISPOSAL SERVICE OR THE SHOP WHERE YOU PURCHASED THE PRODUCT.

Limited Warranty

AVer Information, Inc. (“AVer”) warrants that the applicable product (“Product”) substantially conforms to AVer’s documentation for the product and that its manufacture and components are free of defects in material and workmanship under normal use. “You” as used in this agreement means you individually or the business entity on whose behalf you use or install the product, as applicable. This limited warranty extends only to You as the original purchaser. Except for the foregoing, the Product is provided “AS IS.” In no event does AVer warrant that You will be able to operate the Product without problems or interruptions, or that the Product is suitable for your purposes. Your exclusive remedy and the entire liability of AVer under this paragraph shall be, at AVer’s option, the repair or replacement of the Product with the same or a comparable product. This warranty does not apply to (a) any Product on which the serial number has been defaced, modified, or removed, or (b) cartons, cases, batteries, cabinets, tapes, or accessories used with this product. This warranty does not apply to any Product that has suffered damage, deterioration or malfunction due to (a) accident, abuse, misuse, neglect, fire, water, lightning, or other acts of nature, commercial or industrial use, unauthorized product modification or failure to follow instructions included with the Product, (b) misapplication of service by someone other than the manufacturer’s representative, (c) any shipment damages (such claims must be made with the carrier), or (d) any other causes that do not relate to a Product defect. The Warranty Period of any repaired or replaced Product shall be the longer of (a) the original Warranty Period or (b) thirty (30) days from the date of delivery of the repaired or replaced product.

Limitations of Warranty

AVer makes no warranties to any third party. You are responsible for all claims, damages, settlements, expenses, and attorneys’ fees with respect to claims made against You as a result of Your use or misuse of the Product. This warranty applies only if the Product is installed, operated, maintained, and used in accordance with AVer specifications. Specifically, the warranties do not extend to any failure caused by (i) accident, unusual physical, electrical, or electromagnetic stress, neglect or misuse, (ii) fluctuations in electrical power beyond AVer specifications, (iii) use of the Product with any accessories or options not furnished by AVer or its authorized agents, or (iv) installation, alteration, or repair of the Product by anyone other than AVer or its authorized agents.

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Limitation of Liability

IN NO EVENT SHALL AVER BE LIABLE FOR INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, PUNITIVE, OR CONSEQUENTIAL DAMAGES OF ANY NATURE INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, DATA, REVENUE, PRODUCTION, OR USE, BUSINESS INTERRUPTION, OR PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES ARISING OUT OF OR IN CONNECTION WITH THIS LIMITED WARRANTY, OR THE USE OR PERFORMANCE OF ANY PRODUCT, WHETHER BASED ON CONTRACT OR TORT, INCLUDING NEGLIGENCE, OR ANY OTHER LEGAL THEORY, EVEN IF AVER HAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. AVER’S TOTAL, AGGREGATE LIABILITY FOR DAMAGES OF ANY NATURE, REGARDLESS OF FORM OF ACTION, SHALL IN NO EVENT EXCEED THE AMOUNT PAID BY YOU TO AVER FOR THE SPECIFIC PRODUCT UPON WHICH LIABILITY IS BASED.

Governing Law and Your Rights

This warranty gives you specific legal rights; You may also have other rights granted under state law. These rights vary from state to state.